REMARKS

Reconsideration of the above-referenced application is respectively requested in view of the above amendments and these remarks. Claims 1-21 and 22-26 are currently pending. Claims 22 and 27-29 have been cancelled without prejudice.

Claims 27-29 are rejected under 35 U.S.C. § 101 because the claimed invention of a data structure is directed to non-statutory subject matter and are rejected under 35 U.S.C. § 102(b) as being anticipated by Jacobson, *RFC 1144 "Compressing TCP/IP Headers for Low-Speed Serial Links."* Applicants have cancelled claims 27-29 to obviate these rejections and rendering them moot. Applicants therefore request that these rejections under Section 101 and Section 102(b) be withdrawn.

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 5,535,199 to Amri et al. Claim 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of United States Patent No. 6,765,909 B1 to Sen et al. Applicants have amended claim 1 to incorporate the limitations of claim 22 and respectfully traverses the rejection that the claims are obvious in view of Amri and Sen. In particular, Applicants respectfully submit that the cited combination fails to disclose that the transmitting unit concatenates a compressed RTP header and a compressed UDP header with the new TCP header. By concatenating the RTP header and the UPP header with the new TCP header, the present invention links the compressed RTP header and the compressed UDP header into the new TCP header so that the TCP packet can send the other headers. Applicants have also amended claims 2, 11, 15, 23 and 25 to clarify that the claimed first data packet is the first data packet of a call.

The present invention is not about specific TCP/IP and UDP/IP/RTP header compression techniques but about encapsulating or concatenating the UDP/IP/RTP packets in TCP/IP packets and compressing the headers of both concatenated compression in order to transport voice over cellular network packet data networks. It is respectfully submitted that the cited prior art does not discuss the claimed TCP/IP within UDP/IP/RTP, which is found in the claims as the step of concatenating the headers.

The present invention uses both TCP/IP and UDP/IP/RTP packet compression efficiently by concatenating the header compression techniques. This is done without

requiring modifications to the mobile network or the PDSN infrastructure since it is expected that they can already handle TCP/IP header compression. In other words, this is a packet within a packet, both with compressed headers, and this is unique.

The present invention is about transporting UDP/IP/RTP packets from a mobile device to another mobile device across the cellular network packet data network. IP voice is typically transported using UDP/RTP but in order to take advantage of compression on the mobile network, TCP/IP is used and TCP/IP compression is needed. The present invention transports compressed UDP/IP/RTP with compressed UDP/IP/RTP headers within a TCP/IP packet with compressed TCP/IP headers. This is shown by the claimed step of concatenating the compressed RTP header and the compressed UDP header with the new TCP header. In other words, a compressed UDP voice packet used to carry voice packets is within a compressed TCP/IP packet used transport the packet across the network.

Furthermore, the PDSNs in the middle of the connection between mobile devices do not fully compress/decompress the packet headers. They only decompress the TCP/IP headers and transmit the compressed UDP/RTP headers and content as payload across the packet data network. The PDSN on the other end recompresses the TCP/IP header for transmission to the mobile device over the wireless network. UDP/IP/RTP headers are only compressed/decompressed at the mobile devices. The PDSNs are not aware of the UDP/IP/RTP within the packet so this does not require the PDSN to be modified to support this technique.

For the present invention, the mobile device compresses UDP/IP/RTP headers. The mobile device then puts the UDP/IP/RTP compressed headers and TCP/IP payload and compresses the TCP/IP headers using Van Jacobsen with some flags to indicate it is unidirectional. The mobile device then transmits the entire packet to the PDSN. The PDSN uses standard TCP/IP decompression using Van Jacobsen but does not decompress, nor is it aware of, the compressed UDP/IP/RTP headers within the packet. The PDSN transmits the packet with full TCP/IP header and compressed payload to a second PDSN node. The second PDSN node performs TCP/IP header compression and transmits it to the mobile over the wireless network with the compressed header using standard techniques. The mobile device decompresses the TCP/IP header and observes

the UDP/IP/RTP payload within it. The mobile device uses the payload part of the TCP/IP packet and treats it as an entire UDP/IP/RTP packet with compressed headers. It then decompresses the UDP/IP/RTP header information and processes the packet as a voice packet.

Amri is directed to a process and apparatus wherein a local data termination equipment node, which has the capability of use TCP/IP header compression/decompression, can negotiate with an unknown remote DTE located at another end of the a TCP/IP/X.25 network link to determine if the remote DTE also supports the TCP/IP header compression/decompression. But Amri does not disclose how the compressed RTP header and the compressed UDP header are concatenated with the new TCP header as required by amended claim 1. Amri is directed to a method of negotiating Van Jacobsen header compression on X.25 networks. Amri uses compression techniques if it determines that both sides support it. The present invention, however, is not concerned with utilizing the compression techniques but is concerned with the relationship of those techniques.

Sen is directed to a classification application utilizing a table of connection numbers and associated TCP/IP applications that is utilized for determining a wireless packet communication, quality of service level by decoding a connection number field of the compressed packet header. Packets carrying different connection numbers can be mapped to different Quality of Service planes. Sen is cited because it mentions that the IP Header Compression protocol includes TCP/IP header compression extension of Van Jacobsen TCP/IP header compression and RTP/UDP/IP header compression, which is suitable for lossy link. Sen discloses the two header compression techniques that are claimed, but it does not disclose how the compressed RTP header and the compressed UDP header are concatenated with the new TCP header as required by amended claim 1.

In view of the foregoing, Applicants respectfully submit that the cited combination of Amri and Sen do not disclose, teach or otherwise suggest amended claim 1 as they do not disclose the step of the transmitting unit concatenating the compressed UDP and the compressed RTP packet with a new TCP a packet. Thus, Applicants respectfully submit that claim 1 is patentable over Amri and Sen. Applicants request that these rejections under Sections 102(b) and 103(a) be withdrawn.

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of United States Patent Application Publication No. 2002/0073227 A1 to Bunn et al.; claims 3-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Bunn and further in view of Jacobson; claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Bunn and Jacobson and further in view of United States Patent Application Publication No. 2001/0030963 A1 to Yoshimura et al. and United States Patent Application Publication No. 2004/071096 to Na et al.; claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Bunn and further in view of United States Patent No. 7,158,491 B1 to Le; claims 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Bunn and further in view of Yoshimura; claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Bunn and Yoshimura and further in view of Sen; claim 11-12 and 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Yoshimura; claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Yoshimura and further in view of Jacobson; claims 15-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Yoshimura and further in view of Sen; claim 18 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Yoshimura and Sen and further in view of Na; claim 19 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Yoshimura and Sen and further in view of Jacobson; claims 20-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of United States Patent Application Publication No. 2004/0081151 A1 to Gries et al.; claim 23 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Na, and claims 24 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Amri in view of Na. Claims 2-21 and 23-26 depend upon and include the limitation of amended independent claim 1. Applicants therefore respectfully submit that claim 2-21 and 23-26 are patentable over the various cited combinations for the reasons given above for claim 1 as it overcomes the combination of Amri and Sen. Applicants respectfully submit that dependent claims 2-21 and 23-26 are patentable over the combinations. Applicants request that these rejections under Section 103(a) be withdrawn.

As the Applicants have overcome all substantive rejections and objections given by the Examiner and have complied with all requests properly presented by the Examiner, the Applicants contend that this Amendment, with the above discussion, overcomes the Examiner's objections to and rejections of the pending claims. Therefore, the Applicants respectfully solicit allowance of the application. If the Examiner is of the opinion that any issues regarding the status of the claims remain after this response, the Examiner is invited to contact the undersigned representative to expedite resolution of the matter.

Please charge any fees associated herewith, including extension of time fees, to **50-2117**.

Respectfully submitted,
Hector Ricardo Davila, et al.

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